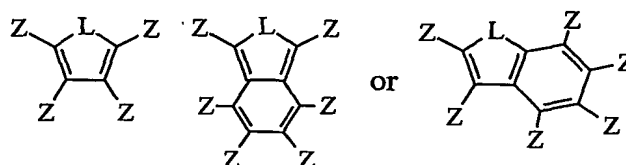


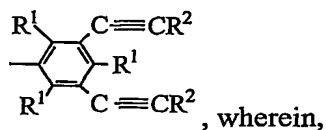
## WHAT IS CLAIMED IS:

1. A monomer comprising i) two dienophile groups (A-functional groups) attached to a single aromatic ring and ii) a second ring structure comprising two conjugated carbon-to-carbon double bonds and a leaving group L (B-functional group), characterized in that said single aromatic ring is directly covalently attached to one of the double bonded carbons of the B-functional group or to a fused aromatic ring containing two such double bonded carbons of the B-functional group, and one A-functional group of one monomer is capable of reaction under cycloaddition reaction conditions with the B-functional group of a second monomer to thereby form a polymer.
2. A monomer according to claim 1 corresponding to the formula:



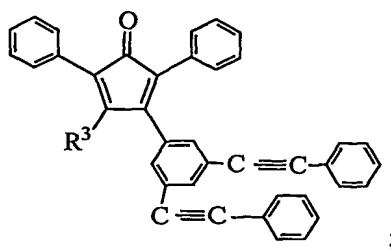
wherein L is -O-, -S-, -N=N-, -(CO)-, -(SO<sub>2</sub>)-, or -O(CO)- ;

- Z is independently in each occurrence hydrogen, halogen, an unsubstituted or inertly substituted aromatic group, an unsubstituted or inertly substituted alkyl group, or two adjacent Z groups together with the carbons to which they are attached form a fused aromatic ring, and in one occurrence, Z is



- R<sup>1</sup> is independently each occurrence selected from the group consisting of hydrogen, halo, C<sub>1-4</sub> alkyl, C<sub>6-60</sub> aryl, C<sub>7-60</sub> inertly substituted aryl groups, and -C≡CR<sub>2</sub>; and
- R<sup>2</sup> is independently each occurrence selected from the group consisting of hydrogen, C<sub>1-4</sub> alkyl, C<sub>6-60</sub> aryl, and C<sub>7-60</sub> inertly substituted aryl groups.
3. A monomer according to claim 2 which is a 2- or 3-di(arylethynyl)aryl-substituted cyclopentadienone compound

4. A monomer according to claim 3 represented by the formula:



wherein  $R^3$  is  $C_{6-20}$  aryl or inertly substituted aryl.

5. A monomer according to claim 4 where in  $R^3$  is phenyl, biphenyl, p-phenoxyphenyl or naphthyl.
6. A monomer comprising at least two acetylenic groups attached to a single aromatic ring, said single aromatic ring being directly, covalently attached to a 2,4-cyclopentadienone or benz-2,4-cyclopentadienone ring structure, characterized in that the cyclopentadienone of one monomer is capable of reacting under cycloaddition reaction conditions with an acetylene group of a second monomer, thereby resulting in formation of an aromatic ring.
7. A spin-coatable, curable composition comprising a monomer according to any one of claims 1-6, an optional solvent, and an optional pore forming material.
8. A method of forming an insulating film on an electrical device comprising coating the device with a composition according to claim 7, removing the optional solvent, curing the monomer, and optionally removing the optional pore forming material.
9. An electrical device comprising an insulating film prepared according to claim 8.